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Pierschbacher et al.

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[54] POLYPEPTIDE

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Related U.S. Application Data

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C07C 103/52; C07G 7/00
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128/1 R; 260/112.5 R; 530/350; 530/815
[58] Field of Search 3/1, 1.4; 128/1 R, 334 R;
260/112.5 R; 424/177; 623/1, 71, 66 A, 66 B

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ILE-GLY-GLN-GLN-SER-THR-VAL-SER-ASP-VAL-PRO-ARG-ASP-LEU-GLU-VAL-VAL-ALA-ALA-THR-PRO-
THR-SER-LEU-LEU-ILE-SER-TRP-ASP-CYS

PEPTIDE II

SER-TRP-ASP-ALA-PRO-ALA-VAL-THR-VAL-ARG-TYR-TYR-ARG-ILE-THR-TYR-GLY-GLU-THR-GLY-GLY-
ASN-SER-PRO-VAL-GLN-GLU-PHE-THR-VAL-CYS

PEPTIDE III

PHE-THR-VAL-PRO-GLY-SER-LYS-SER-THR-ALA-THR-ILE-SER-GLY-LEU-LYS-PRO-GLY-VAL-ASP-TYR-
THR-ILE-THR-VAL-TYR-ALA-VAL-THR-CYS

PEPTIDE IV

TYR-ALA-VAL-THR-GLY-ARG-GLY-ASP-SER-PRO-ALA-SER-SER-LYS-PRO-ILE-SER-ILE-ASN-TYR-ARG-
THR-GLU-ILE-ASP-LYS-PRO-SER-GLN-MET-CYS

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[57]

ABSTRACT

A polypeptide having the cell-attaching activity of fibronectin. The polypeptide has 108 amino acid residues and the formula: H-Ile-Gly-Gln-Gln-Ser-Thr-Val-Ser-Asp-Val-Pro-Arg-Asp-Leu-Glu-Val-Val-Ala-Ala-Thr-Pro-Thr-Ser-Leu-Leu-Ile-Ser-Trp-Asp-Ala-Pro-Ala-Val-Thr-Val-Arg-Tyr-Tyr-Arg-Ile-Thr-Tyr-Gly-Glu-Thr-Gly-Gly-Asn-Ser-Pro-Val-Gln-Glu-Phe-Thr-Val-Pro-Gly-Ser-Lys-Ser-Thr-Ala-T r-Ile-Ser-Gly-Leu-Lys-Pro-Gly-Val-Asp-Tyr-Thr-Ile-Thr-Val-Tyr-Ala-Val-Thr-Gly-Arg-Gly-Asp-Ser-Pro-Ala-Ser-Ser-Lys-Pro-Ile-Ser-Ile-Asn-Tyr-Arg-Thr-Glu-Ile-Asp-Lys-Pro-Ser-Gln-Met-OH. The polypeptide or a biologically active fragment thereof, such as H-Tyr-Ala-Val-Thr-Gly-Arg-Gly-Asp-Ser-Pro-Ala-Ser-Ser-Lys-Pro-Ile-Ser-Ile-Asn-Tyr-Arg-Thr-Glu-Ile-Asp-Lys-Pro-Ser-Gln-Met-OH can be employed in the preparation of substrata designed for the attachment of cells thereto. A Cys-residue may optionally be attached at the C-terminus. It can be linked to the surface of a prosthetic device to particularly attract endothelial cells and fibroblastic cells.

11 Claims, 3 Drawing Figures